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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RYMAN, DANIEL J	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 12/11/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/555,868	SINGER, JOSEF	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-9 and 11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-9 and 11-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/19/2003 have been fully considered but they are not persuasive. On pages 7-8 of the Response, Applicant argues with respect to claims 2-9, 11-13, 15-17, 19 and 20, that Bharucha teaches away from the claimed invention since "Bharucha discloses a method of integrating mini packets of variable length into ATM cells (AAL2-Adaptation)." Examiner, respectfully, submits that Applicant has mischaracterized Bharucha. The invention of Bharucha is not to integrate mini packets of variable length (AAL2 layer) into ATM cells (ATM Cell layer). Bharucha explicitly teaches this as prior art in Fig. 2. Instead, Bharucha's invention is to integrate mini packets of variable length directly onto the physical layer (Fig. 5). As such, Examiner maintains that Bharucha reads on the limitations of claims 2-9, 11-13, 15-17, 19 and 20 as cited in the Office Action.

2. Applicant further argues that "Casper is related to SONET and SDH transmission system in general and does not teach or suggest the features of the pending claims, as illustrated above." Examiner, respectfully, agrees that Casper is related to SONET and SDH transmission systems which is why Examiner combined Bharucha with Casper in order to arrive at the claimed invention which pertains to SDH transmission systems.

3. For the above reasons, Examiner maintains that the combination of Bharucha with Casper renders the limitations of claims 2-9, 11-13, 15-17, 19 and 20 obvious.

4. On page 8 of the Response, Applicant argues, with respect to claims 14 and 18, that "Petersen relates only to a general discussion of an ATM multiplexing" and thus does not disclose directly packing mini cells directly into PDH or SDH transmission systems. Examiner,

respectfully, points out that Examiner does not rely on Petersen to disclose packing mini cells directly into PDH or SDH transmission systems. Instead, Examiner relies on the combination of Bharucha with Casper to teach these limitations. Thus, for the above reasons, Examiner maintains that the combination of Bharucha and Casper with Petersen renders the limitations of claims 14 and 18 obvious.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-9, 11-13, 15-17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharucha et al (USPN 6,229,821) in view of Casper et al (USPN 5,963,608).

8. Regarding claims 6, 15, 19, and 20, Bharucha discloses an apparatus and method for sending and receiving data in a serial transmission system, comprising means for and steps for: receiving and arranging data incoming in a plurality of data channels into a plurality of mini-cells having a flexible length (col. 1, lines 31-39; col. 2, lines 13-19; and col. 3, lines 24-31) where statistical multiplexing evidences the presence of a plurality of data channels; generating a single data stream from the plurality of mini-cells (col. 3, lines 24-37), wherein the received plurality of mini-cells are arranged following one another in the data stream (Fig. 6 and col. 3, line 66-col. 4, line 5); directly generating individual transmission frames from the data stream (Fig 6; col. 3, lines 36-37; and col. 3, line 56-col. 4, line 5); transmitting the generated individual transmission frames via the serial transmission system, wherein the individual transmission frames contain a number of mini-cells and correspond to the frame structure of the serial transmission system (Fig 6; col. 3, lines 24-37; and col. 3, line 56-col. 4, line 5). Bharucha possibly does not expressly disclose receiving incoming transmission frames corresponding to a frame structure of the serial transmission system, directly generating a single data stream from the incoming transmission frames; distributing data contained in a plurality of mini-cells contained within the data stream onto respective data channels; and restoring data of individual data channels from the plurality of mini-cells; however, such steps would have been obvious to one of ordinary skill in the art at the time of the invention. Bharucha teaches a method for reducing overhead by packing AAL2 mini-cells directly into physical layer frames. While Bharucha does not expressly disclose that the physical layer frames are unpacked by the reverse process that the mini-cells were packed upon reception of the physical layer frames at a receiver, it would have been obvious to one of ordinary skill in the art at the time of the invention to do

this in order to retrieve the information transmitted in the mini-cells. Bharucha possibly does not expressly disclose that the serial transmission system is at least one of an SDH and a PDH transmission system; however, SDH is a well known serial transmission system, as is evidenced by Casper (col. 2, lines 25-29). It would have been obvious to one of ordinary skill in the art at the time of the invention to use SDH as the serial transmission system since SDH is a well known serial transmission system.

9. Regarding claims 2 and 11, referring to claims 19 and 20, Bharucha in view of Casper discloses that it is well known in the art to have an ATM data packet generator configured to generate and recover data packets corresponding to an asynchronous transfer mode from the data stream and incoming transmission frames, respectively (Bharucha: Figs. 1-4 and col. 1, line 31-col. 3, line 20); a transmission frame generator configured to generate transmission frames corresponding to one of the SDH and PDH transmission system from the data packets corresponding to the asynchronous transfer mode; and a data stream generator configured to generate the data stream from the data packets corresponding to the asynchronous transfer mode (Bharucha: Figs. 1-4 and col. 1, line 31-col. 3, line 20 and Casper: col. 2, lines 25-29).

10. Regarding claims 3, 7, 12, and 16, referring to claims 19, 6, 20, and 15, Bharucha in view of Casper teaches generating position data with respect to a position of a first mini-cell for each corresponding individual transmission frame (Bharucha: Figs. 6 and 7 and col. 4, lines 17-22); and inserting the position data into each corresponding individual transmission frame such that upon reception the data stream is generated on the basis of position data with respect to the position of a first mini-cell in the transmission frame that are contained in every transmission frame (Bharucha: Figs. 6 and 7 and col. 4, lines 17-22).

11. Regarding claims 4, 8, 13, and 17, referring to claims 3, 7, 12, and 16, Bharucha in view of Casper discloses that the position data are arranged at the beginning of a respective transmission frame (Bharucha: Figs. 6 and 7 and col. 4, lines 17-22).

12. Regarding claims 5 and 9, referring to claims 19 and 6, Bharucha in view of Casper discloses that generating a single data stream from the plurality of mini-cells includes a statistical time-division multiplexing of the data incoming in the plurality of data channels (Bharucha: col. 3, lines 24-27 and col. 5, lines 1-6).

13. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharucha et al (USPN 6,229,821) in view of Casper et al (USPN 5,963,608) as applied to claims 20 and 15 above, and further in view of Petersen et al (USPN 5,802,051).

14. Regarding claims 14 and 18, referring to claims 20 and 15, Bharucha in view of Casper possibly does not expressly disclose that distributing data includes demultiplexing the data stream corresponding to the information contained in a respective header of the plurality of mini-cells. Petersen teaches that the headers of mini-cells contain a connection identifier as well as a length field (col. 2, lines 32-48) where a connection identifier is needed upon demultiplexing to ensure that each mini-cell is assigned to the correct data stream and a length field is needed to ensure that the entirety of a mini-cell is properly received and sent to the data stream. It would have been obvious to one of ordinary skill in the art at the time of the invention to demultiplex the data stream corresponding to the information contained in a respective header of the plurality of mini-cells since the information in the mini-cells is needed in order to ensure proper reception and forwarding of each mini-cell.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wirkestrand (USPN 5,774,469) see col. 2, lines 17-36 which teaches about mini-cell headers and a pointer in the frame of the mini-cell encapsulation which points to the start of the first mini-cell in the frame. Chitre et al (USPN 5,600,653) see col. 1, lines 35-57 which details that it is well known to transport ATM over SDH and PDH networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

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